

Amendments to the Specification:

Please replace paragraph [0001] with the following amended paragraph:

[0001] The present patent application is a continuation-part of U.S. patent application Ser. No. 09/333,825 filed Jun. 15, 1999, now U.S. Patent No. 6,795,110 B1, issued September 21, 2004, for a WEATHERPROOF AND WATERTIGHT DIGITAL ELECTRONIC CAMERA, INCLUDING A SOLID OR FLUID-FILLED DIGITAL CAMERA OPERATING AT GREAT DEPTHS to the selfsame inventor as the present application. The contents of the related predecessor patent application are incorporated herein by reference.

Please replace paragraph [0117] with the following amended paragraph:

[0117] A preferred variant of any of the switches 161-163 (shown in FIG. 1) is shown in detail in the combination electrical and mechanical schematic block diagram of FIG. [[3]] 2.

Please replace paragraph [0118] with the following amended paragraph:

[0118] The first variant preferred shutter actuation interface includes a magnet 201 mounted on slide switch 1611 having a sliding lever [[1612]] 1613 and retained in the illustrated position by elastic bands, or plastic springs, 1612. Pressing with the fingers on the lever 1613 in the direction of vector A moves the side switch into the stop 1614, positioning magnet 204 proximate to Hall effect sensor 1615 and producing an electrical signal which, as amplified in amplifier 1616, suffices to trigger the shutter of the camera 11 (not shown in FIG. [[3]] 2, shown in FIG. 1) electrically connected to wire 1617. The Hall effect sensor 1615 is preferably Micronics type HAL 1145VA. The amplifier 1616 is preferably industry standard part number 7400.

Please replace paragraph [0121] with the following amended paragraph:

[0121] The data interface of the waterproof digital electronic camera system of the present invention, for example an infrared serial personal computer interface including the infrared (IR)

PC interface link 17 shown in FIG. 1, is illustrated in the combined schematic and diagram of FIG. [[4]] 3.

Please replace paragraph [0122] with the following amended paragraph:

[0122]The preferred PC interface takes place through an infrared (IR) PC interface link 17 consisting of an RS-232C to TTL converter 171, an encoder-decoder 172 and an infrared IrDa compliant transceiver 173. It receives serial data in the RS-232C interface format upon two 115,200 bit per second (bps) signal lines 174 from the digital electronic camera 11.

Please replace paragraph [0127] with the following amended paragraph:

[0127] The basic principal of the present invention that (i) signals from the camera can be converted to modulated radio frequency (RF) signals, fed to an antenna 373a and that (ii) these RF signals will traverse the camera casting without the need for penetrating wires which are prone to leakage, is the same no matter what particular (i) camera, and (ii) wireless digital transmission standards, and protocols, are involved. A practitioner of the wired and wireless digital communication arts will recognize that the present invention may be realized with many different (i) wired and (ii) wireless communications standards, and that many suitable standards are presently (circa 2000) implemented in semiconductor chips or chip sets, and are not difficult of use in the underwater camera system of the present invention.

Please replace paragraph [0129] with the following amended paragraph:

[0129] The preferred power actuation interface shown in FIG. 4 again uses a magnet 204, now mounted on toggle switch 1811 having a swing arm 1812 retained in the illustrated position by a latch 1813. Moving under force of the fingers, the magnet 204 proximate to the Reed relay switch 181 closes this Reed relay 1814, gating power through the path thereby established from the battery 184 to the camera 11 (both shown in FIG. 1).

Please replace paragraph [0132] with the following amended paragraph:

[0132] When the battery 184 is to be recharged, another coil carrying an alternating current (not shown in FIG. 1, shown in FIGS. 6 and 7) is placed outside the other housing 121 proximately to the charging coil 182, and is aligned to induce current in this internal charging coil 182. The outer coil acts as the primary winding of a transformer while the inner, charging, coil 182 acts as the secondary. The alternating current inductively induced in the inner (secondary) charging coil 182 is then rectified, filtered and regulated in the charging circuit 182 and applied as a d.c. current to charge the battery ~~[[183]]~~ 184. In this way the battery ~~[[183]]~~ 184 can be charged without any need for opening the housing 122, or even for having any wires to penetrate the housing 122. The battery ~~[[183]]~~ 184 is charged and recharged entirely while it is continuously within the plastic housing 122.

Please replace paragraph [0133] with the following amended paragraph:

[0133] A detail combination electrical and mechanical schematic block diagram of the preferred embodiment of the recharging circuitry for the waterproof digital electronic camera system according to the present invention, previously seen in FIGS. 1 through 4, is shown in FIG. 5. An external source of a.c. power 5 is inductively coupled through transformer 18, the secondary winding of which is the charging coil 182 located inside the housing 12 (shown in FIG. 1). The a.c. current induced in the charging coil 182 (a transformer winding) is communicated to rectifier 1831, normally a simple diode bridge, and filtered as a d.c. voltage in capacitor 1832. The d.c. voltage and current is conditioned in battery charging circuit ~~[[1835]]~~ 1833 and applied to charge battery ~~[[181]]~~ 184. Power from the battery ~~[[181]]~~ 184 may optionally be regulated in voltage regulator 1834 before application to camera 11 (shown in FIG. 1).

Please replace paragraph [0150] with the following amended paragraph:

[0150] A third embodiment is shown in FIG. 10. In this third variant embodiment the electronic digital camera electronics 1002, including the electronic imager device 1003, are cast in hard plastic 1001 with no air spaces--as in the second embodiment. But here the optics 1004 1005 are located outside the casting, being immersed in the external water environment.

Please replace paragraph [0159] with the following amended paragraph:

[0159] Any replacement of the rechargeable battery 184 which may at some point become necessary may, in accordance with the present invention, optionally be made possible by having a battery compartment located near the outside of the housing. The battery 184 is installed in a suitable battery holder and then this sub-compartment is filled with, preferably, a semi-rigid plastic encapsulant (Master Bond EP30DP) which provides a hermetic seal around the battery 184 and all wires and contacts and has good adhesion properties. When the battery 184 is to be replaced, the semi-rigid encapsulant is cut away with a small knife and the battery 184 replaced. Upon replacement of the battery 184, the battery compartment is then refilled with the same encapsulant.